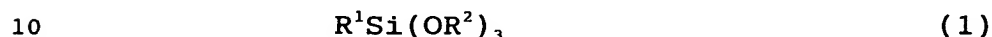


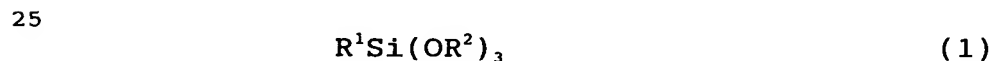
CLAIMS:

1. An optical waveguide-forming material comprising a photocurable organopolysiloxane composition comprising an alkali-soluble organopolysiloxane and a photoacid generator, said organopolysiloxane being obtained by (co)hydrolytic condensation of at least one silane compound having the general formula (1):

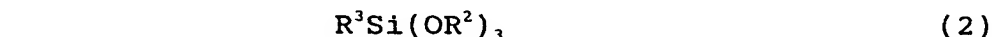


wherein  $R^1$  is a monovalent organo group of 2 to 30 carbon atoms having hydrolyzable epoxide, and  $R^2$  is hydrogen or a substituted or unsubstituted monovalent hydrocarbon group of 1 to 10 carbon atoms, and having an average molecular weight of 500 to 50,000 as determined by GPC using polystyrene standards.

2. An optical waveguide-forming material comprising a photocurable organopolysiloxane composition comprising an alkali-soluble organopolysiloxane and a photoacid generator, said organopolysiloxane being obtained by cohydrolytic condensation of at least one silane compound having the general formula (1):



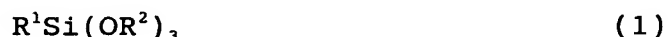
wherein  $R^1$  is a monovalent organo group of 2 to 30 carbon atoms having hydrolyzable epoxide, and  $R^2$  is hydrogen or a substituted or unsubstituted monovalent hydrocarbon group of 1 to 10 carbon atoms, and at least one silane compound having the general formula (2):



wherein  $R^2$  is as defined above and  $R^3$  is a monovalent hydrocarbon group of 1 to 20 carbon atoms, the silane compound of formula (1) being in a proportion of at least 10 mol% based on the entire silane compounds, and said

organopolysiloxane having an average molecular weight of 500 to 50,000 as determined by GPC using polystyrene standards.

3. An optical waveguide-forming material comprising a photocurable organopolysiloxane composition comprising an alkali-soluble organopolysiloxane and a photoacid generator, said organopolysiloxane being obtained by cohydrolytic condensation of at least one silane compound having the general formula (1):



wherein  $R^1$  is a monovalent organo group of 2 to 30 carbon atoms having hydrolyzable epoxide, and  $R^2$  is hydrogen or a substituted or unsubstituted monovalent hydrocarbon group of 1 to 10 carbon atoms, at least one silane compound having the general formula (2):

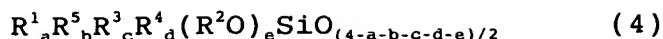


wherein  $R^2$  is as defined above and  $R^3$  is a monovalent hydrocarbon group of 1 to 20 carbon atoms, and at least one silane compound having the general formula (3):



wherein  $R^2$  is as defined above and  $R^4$  is a group as represented by  $R^1$  or  $R^3$ , the silane compound of formula (1) being in a proportion of at least 10 mol% based on the entire silane compounds, the silane compound of formula (3) being in a proportion of up to 40 mol% based on the entire silane compounds, and said organopolysiloxane having an average molecular weight of 500 to 50,000 as determined by GPC using polystyrene standards.

4. An optical waveguide-forming material comprising a photocurable organopolysiloxane composition comprising an alkali-soluble organopolysiloxane and a photoacid generator, said organopolysiloxane having the average compositional formula (4):



wherein  $R^1$  is a monovalent organo group of 2 to 30 carbon atoms having hydrolyzable epoxide,  $R^2$  is hydrogen or a substituted or unsubstituted monovalent hydrocarbon group of 1 to 10 carbon atoms,  $R^3$  is a monovalent hydrocarbon group of 1 to 20 carbon atoms,  $R^4$  is a group as represented by  $R^1$  or  $R^3$ ,  $R^5$  is a monovalent organo group of 2 to 30 carbon atoms as represented by  $R^1$  in which the epoxide ring has been opened, the subscripts a, b, c, d and e are positive numbers satisfying  $0 \leq a \leq 0.9$ ,  $0.1 \leq b \leq 1.0$ ,  $0.1 \leq a+b \leq 1.0$ ,  $0 \leq c \leq 0.9$ ,  $0 \leq d < 0.8$  and  $0 < e \leq 0.5$ , and said organopolysiloxane having an average molecular weight of 500 to 50,000 as determined by GPC using polystyrene standards.

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5. The optical waveguide-forming material of claim 1 wherein said photocurable organopolysiloxane composition further comprises a solvent.

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6. The optical waveguide-forming material of claim 1 wherein said photocurable organopolysiloxane composition further comprises at least one component selected from the group consisting of a reactive diluent, acid diffusion retarder, photosensitizer, dehydrating agent and

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microparticulate inorganic oxide.

7. An optical waveguide formed using the optical waveguide-forming material of claim 1.

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8. A method for preparing an optical waveguide, comprising processing the optical waveguide-forming material of claim 1 by photolithography.